

DRAFT

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

MEMORANDUM

July 11, 2016

TO: Phillip Fielder, P.E., Permits and Engineering Group Manager

THROUGH: Rick Groshong, Environmental Program Mgr. III, Compliance and Enforcement

THROUGH: Phil Martin, P.E., Existing Permits Section Manager

THROUGH: Peer Review, Regional Office at Tulsa

FROM: Anthony Maxwell, DEQ Regional Office at Tulsa (ROAT)

SUBJECT: Evaluation of Operating Permit No. **2014-1978-TVR2**
ACME Brick Co.
Tulsa Brick Plant (Facility ID 8)
Large portions of the SE/4 and SE/4 NE/4 of Sec 28, T20N, R13E
4103 Dawson Rd, Tulsa, Tulsa County (Entrance at 36.18003°N, 95.92951°W)

I. INTRODUCTION

Acme Brick Co. (applicant) requests renewal of the operating permit for their Tulsa Brick Plant (facility, SIC 3251/NAICS 327120). The facility currently operates under Part 70 Permit No. 2009-329-TVR, issued February 11, 2010. No changes are made in equipment or operations, and the facility remains a major source. The facility has a MACT compliance schedule of December 26, 2018, for Part 63 NESHAP Subpart JJJJ. The permit and memorandum are updated appropriately.

II. PROCESS DESCRIPTION

The facility comprises four buildings with a combined floor space of approximately 51,000 ft², all used in the manufacture of bricks. Although the raw material used is commonly called clay, it is actually shale. In this instance, the facility uses a Seminole formation material described by geologists as “gray shale containing Dawson coal and limestone.”

Although the plant has an estimated potential to manufacture 104,500 TPY of fired ware; the permit limits fired ware production to 87,599 TPY. Approximately 110,000 TPY of raw material is processed and prepared for firing. Shrinkage in the range of 10-25%_w results from the combustion of carbon in the raw material and from driving off moisture. Potential to emit (PTE) for this operation is not defined by the rate at which raw material is processed. Instead, the curing operation limits capacity.

Grinding and Raw Material Preparation

Some raw material is mined on site, but the majority is not. Raw materials are trucked on-site and stockpiled. Material is deposited into one of three gravity feed bins that serve the primary crusher, which is located below ground. Once crushed, small amounts of iron oxide, manganese or barium compounds, and other additives are sometimes incorporated for property enhancement. Additives vary depending on the product and product development. The mixture then proceeds to the secondary grinder hopper prior to secondary grinding. After secondary grinding, the raw material progresses to one of three finishing screens. Properly sized material proceeds to one of two manufacturing silos while all oversized material returns to the secondary grinding hopper for further processing. The first silo feeds an automated line and the second silo feeds a handset line. Emissions from the secondary crusher hopper, secondary crusher, and finishing screens are all controlled by a Dust Hog FJH-36-H dust collector that discharges exterior to the grinding and manufacturing building. The collector has maximum emissions of 0.01 grains/actual cubic feet/minute.

Automated line

Raw material is fed to a mixer where moisture is added, then to the pugmill and extruder where clay with approximately 12-15% moisture is formed into slugs approximately 8" × 6" × 6'. Slugs are cut into individual clay segments using a mandrel with evenly spaced wires. These smaller units are called "unfired bricks." Dry additives or slurry coatings may be placed on the surface of each unfired brick. The unfired bricks are placed on kiln cars by machines. Loaded kiln cars are moved to the holding room.

Another automated line called the additives line was originally established, but nothing remains of it except for some of the underlying structures. A Dust Hog, SBD 12-3 dust collector was established to control emissions from the pugmill and dry additive line. It is rated at a maximum of 0.01 grains/actual cubic feet/minute. Although the pugmill is largely a wet process, the dust collector still serves it. The dust collector does not discharge to atmosphere.

Handset line

The raw material is fed to a combination pugmill/extruder where the clay slugs are formed with 12-15% moisture and cut into individual unfired bricks, and then manually handset on kiln cars.

Unfired Brick Firing

The firing process causes vitrification of the clay, which means that kiln temperatures are sufficient to fuse grains and close pores of a clay product, making the mass impervious.

The firing process is carried out in three steps in the main plant building, with the kiln cars mechanically advancing through the holding room, the tunnel dryer, and the tunnel kiln. The firing process takes 40 or more hours to complete. The holding room is normally at room temperature; however some heating can be supplied as needed from kiln ducts. The tunnel dryer operates at a maximum temperature of approximately 450°F. Heat is provided by combustion at 2,000°F in the tunnel kiln, from which necessary heat is ducted to the tunnel dryer, and even to the holding room, but only under special circumstances. Each of these three operations has an individual exhaust stack.

Additionally, the kiln has a waste heat dump stack that allows heat from the cool end of the kiln to escape, aiding cooling. There is no firing in this zone of the kiln and temperature is controlled through drafting. The kiln also has a kiln under car stack. This exhausts clean air used to keep the area beneath the kiln car seals cool. Cooling air is ambient air taken from the plant interior. Because this air is not treated in any way before entering the undercar area and is isolated from any emission sources, the exhaust carries no added pollutants. The portion of the kiln car exposed to the kiln is covered with ceramics and the underneath is steel. Without the cooling air, cars would warp or melt. The bricks are unloaded, prepared for shipment, and taken to storage. A kiln car vacuum is used to clean the kiln cars once they are off-loaded.

Laser Engraving

Less than 1% of the bricks are monogrammed (laser engraved) as a special order. The engraving vitrifies the surface, leaving black marks. This is classified as an insignificant operation. There are dust collectors on the laser stations, but the emissions are negligible. Flakes of calcite from the engraving action block the laser, so the “fumes” are swept from the surface to provide the cleanest engraving possible. Two dust collectors are used in the laser engraving process.

The curing process is effectively a bottleneck on all operations. Assuming continuous operation of the curing process through the holding room, drying room, and kiln, the manufacturing process can produce enough uncured brick in only 3,120 hours to completely satisfy the demand imposed by curing. Thus, all processes involved in producing uncured bricks are assumed to have a maximum annual operation of 3,120 hours.

III. EQUIPMENT

As mentioned in the preceding process description, process equipment includes three raw material feeders, a primary crusher, a dry additive hopper, a hopper or feeder, a secondary crusher, three screens, and two manufacturing silos. The automated line contains a pugmill and extruder and the handset line contains a pugmill/extruder. Although the holding room, tunnel dryer, and kiln are separate areas, heat for each may be supplied by burners in the kiln area. Generally speaking, the holding room does not require heat, but rare circumstances could present a need for some heating.

Emission units (process related) have been arranged into Emission Unit Groups (EUGs) and are shown in the following paragraphs.

EUG-1 Facility Wide

This emission unit group is facility-wide. It includes all emission units and is established to discuss the applicability of those rules or compliance demonstrations that may affect all sources within the facility.

EUG-2 Fugitive Emissions

All plant fugitives are accounted for by the emissions from the roof vents. Fugitive emissions come from the manufacturing operations, handling, and stockpiling of the raw material. This includes all emissions points that are not exhausted through a stack, including the drops for the

hoppers, grinders, and silos. There are six roof vents identified collectively as EU #1 of this EUG. They were constructed over the period 1973 through 1983.

Roof Vents

ID #	Rated acfm		ID #	Rated acfm
RV1	6,000		RV4	55,000
RV2	6,000		RV5	20,000
RV3	20,000		RV6	55,000

EUG-3 Firing Processes

EU #	Equipment	Construction Date
1	Tunnel Dryer	1985
2	Holding Room	1985
3	Tunnel Kiln	1985
4	Waste Heat Dump	1985
5	Kiln Car Vacuum	1986

The only combustion source is 30 MMBTUH of natural gas-fired burners in the kiln.

The Kiln Car Vacuum dust collector is manufactured by Hoffman and is rated at maximum emissions of 0.01 grains per actual cubic feet per minute.

EUG-4 Controlled PM Emissions

This EUG contains only those sources whose particulate emissions are subject to control. In each case, the control device exhausts inside the building. The collector identified as EU #1 controls emissions from the secondary crusher, its feed hopper, and the three finishing screens. The collector identified as EU #2 was established to control particulate emissions from the additives line, which no longer exists, and from the pugmill associated with both the additives line and the existing automated line. The pugmill has negligible particulate emissions, being a largely wet process, so the facility has requested that the operation of this collector not be required unless the facility decides to reinstall and operate the additives line. As noted previously, the collector identified as EU #3 is used to improve process operations and is not a pollution control device.

Dust Collectors

EU #	Equipment	Construction Date
1	Grinding System	1995
2	“Manufacturing”	2002
3	Laser Engraving	2004

IV. EMISSIONS

Actual emissions and potential to emit (PTE) are calculated using various methods. Various stack tests have been performed at this and similar facilities and some items use published

emission factors. Because the facility has accepted a federally enforceable limit on total production, PTE incorporates that into estimates. The Tunnel Kiln was stack tested on September 6, 2002, while operating at approximately 9.11 TPH of finished product. Results from that test were presented in units of pounds per hour (lb/hr), which are easily converted to pounds per ton (lb/T), and then to tons per year (TPY) through multiplication by the federally enforceable limit. A lb/hr datum can be retrieved by dividing TPY by 8,760 hours per year. Note that each of the derived lb/T numbers is larger than the emission factor shown for that pollutant in Tables 11.3-2, 3, 4, and 5 of AP-42 (8/97). Further note that using the organic pollutants factors shown in Table 11.3-6 or the metal HAP factors shown in Table 11.3-7 result in every pollutant (HAP or non-HAP) with emissions less than 0.1 TPY.

Tunnel Kiln

Pollutant	Test results		PTE	
	Lb/hr	Lb/T	TPY	Average lb/hr
PM	2.576	0.28	12.4	2.83
CO	16.97	1.86	81.6	18.6
NO _x	6.844	0.75	32.9	7.51
VOC	2.001	0.22	9.62	2.20
SO ₂	8.807	0.97	42.3	9.67
HF	11.19	1.23	53.8	12.3
HCl	2.548	0.28	12.3	2.80

A similar facility at Millsap, Texas, identified as the Bennett Plant, ran performance tests on the dryer and waste heat dump stacks. The Bennett test was performed at rated capacity of 120,000 TPY or 13.7 TPH of finished product. The data were treated in the same fashion as shown in the preceding table, converting lb/hr to lb/T and thence to PTE figures, using Tulsa capacity. The waste heat dump was treated as representing the holding room as well, because any heat diverted to the holding room is a subset of waste heat. The lb/T figure derived for PM exceeds the emission factor shown in Table 11.3-6 of AP-42 (8/97).

Dryer

Pollutant	Test results		PTE	
	Lb/hr	Lb/T	TPY	Average lb/hr
PM	0.289	0.021	0.92	0.21
CO	2.725	0.199	8.71	1.99
NO _x	0.027	0.002	0.09	0.02
VOC	0.641	0.047	2.05	0.47
SO ₂	0.036	0.003	0.12	0.03
HF	0.0035	0.0003	0.01	<0.01
HCl	<0.001	<0.001	<0.003	<0.001

Waste Heat Dump

Pollutant	Test results		PTE	
	Lb/hr	Lb/T	TPY	Average lb/hr
PM	1.541	0.112	4.93	1.12
CO	0.330	0.024	1.06	0.24
NO _x	0.117	0.009	0.37	0.09
VOC	0.239	0.017	0.76	0.17
SO ₂	0.514	0.038	1.64	0.38
HF	0.124	0.009	0.40	0.09
HCl	0.174	0.013	0.56	0.13

Particulate emissions for the primary crusher are based on factors from Table 11.3-1 of AP-42 (8/97), which are stated in terms of pounds of pollutant per ton of fired product. Noting that the crusher operates only 3,120 hours per year allows a back-calculation of hourly emissions. Thus, PM₁₀ emissions are 0.10 TPY or 0.07 lb/hr. Each of two hoppers has an associated drop point, for all of which an emission factor of 0.00072 lb/T is taken from Table 11.19-2.2 of AP-42 (8/04). In this case, the factor is based on material throughput. The secondary crusher and related drop point are rated at 75 TPH and 132,000 TPY, so emissions of PM₁₀ are 0.054 lb/hr and 0.048 TPY for each. The additive hopper and related drop point are rated at 4 TPH and 8,000 TPY, so emissions of PM₁₀ are 0.003 lb/hr and 0.003 TPY for each. The automated line silo is rated at 60 TPH and 125,400 TPY and the handset silo is rated at 4 TPH and 6,600 TPY. Each of these uses the same 0.00072 lb/T factor stated above, so their emissions are 0.043 lb/hr or 0.045 TPY and 0.003 lb/hr or 0.002 TPY, respectively. Although these points are inside the building and may be captured by the dust collector controlling certain grinding room equipment, they are treated as fugitives for the current analysis. Because the totals of all PM or PM₁₀ emissions from these points is less than 5 TPY, they are considered to be Insignificant activities.

The grinding room dust collector is guaranteed at 0.01 gr/dscf, and is stated to be 98% efficient. At 14,000 acfm, this equates to 1.2 lb/hr or 1.87 TPY of PM (in 3,120 hours of operation). Using the stated 98% efficiency implies 94 TPY of uncontrolled PM. It is not appropriate to calculate PTE based on 8,760 hours, because of bottlenecking imposed by the firing operation.

Previous permits included information showing that fugitive emissions through the roof vents average 0.44 TPY each, for a total of 2.64 TPY of PM₁₀.

The following table summarizes the preceding information. The first three rows assume continuous operation, so lb/hr can be calculated by dividing the annual emission number by 8,760 and multiplying by 2,000 lb/T. The fugitives arise from several sources, only some of which operate continuously. Because the last two rows have insignificant TPY, there is no reason to estimate lb/hr figures.

FACILITY-WIDE ANNUAL EMISSIONS (TPY)

	PM₁₀	CO	NO_x	VOC	SO₂	HF	HCl
Kiln	12.4	81.6	32.9	9.62	42.3	53.8	12.3
Dryer	0.92	8.71	0.09	2.05	0.12	0.01	<.01
Waste Heat Dump	4.93	1.06	0.37	0.76	1.64	0.40	0.56
Fugitives*	2.87			0.80			
Roof Vents	2.64						
Totals	23.8	91.4	33.4	13.2	44.1	54.2	12.9

V. INSIGNIFICANT ACTIVITIES

Activities preceded by an asterisk (*) require recordkeeping to demonstrate their continuing insignificance. Calculations are shown where necessary to demonstrate that the activity contributes less than the threshold amount of emissions.

Space heaters, boilers, process heaters, and emergency flares less than or equal to 5 MMBTUH heat input (commercial natural gas). There are 10 space heaters on-site.

Emissions from stationary internal combustion engines rated less than 50-hp output. None identified, may occur in the future

* Emissions from fuel/storage dispensing equipment operated solely for facility-owned vehicles if fuel throughput is not more than 2,175 gallons/day, averaged over a 30-day period. There are two diesel storage tanks on site, one 11,750 gallons, and one 3,000 gallons. The last full compliance evaluation report showed a maximum single month use averaging 258 gallons per day, with average annual use slightly higher than 200 gallons per day.

Cold degreasing operations utilizing solvents that are denser than air. There is one 25-gallon solvent tub used for washing parts in maintenance. The last full compliance evaluation showed purchase of 20 gallons of solvent during the preceding 12 months.

Welding and soldering operations utilizing less than 100 pounds of solder and 53 tons per year of electrodes. There are no welding or soldering process operations. Because any welding or soldering is a facility maintenance activity, it is Trivial and needs no further discussion.

Activities having the potential to emit no more than 5 TPY (actual) of any criteria pollutant. The primary crusher has uncontrolled fugitive PM₁₀ emissions less than 5 TPY when calculations use the maximum permit limit of 87,599 TPY of fired ware. Laser engraving of special order bricks has calculated uncontrolled emissions of 0.75 TPY of PM₁₀.

VI. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-1 (General Provisions)

[Applicable]

Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-2 (Incorporation by Reference) [Applicable]
This subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations listed in OAC 252:100, Appendix Q. These requirements are addressed in the “Federal Regulations” section.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Subchapter 3 enumerates the primary and secondary ambient air quality standards and the significant deterioration increments. At this time, all of Oklahoma is in “attainment” of these standards.

OAC 252:100-5 (Registration, Emissions Inventory and Annual Operating Fees) [Applicable]
Subchapter 5 requires sources of air contaminants to register with Air Quality, file emission inventories annually, and pay annual operating fees based upon total annual emissions of regulated pollutants. Emission inventories were submitted and fees paid for previous years as required.

OAC 252:100-8 (Permits for Part 70 Sources) [Applicable]
Part 5 includes the general administrative requirements for Part 70 permits. Any planned changes in the operation of the facility that result in emissions not authorized in the permit and that exceed the “Insignificant Activities” or “Trivial Activities” thresholds require prior notification to AQD and may require a permit modification. Insignificant activities refer to those individual emission units either listed in Appendix I or whose actual calendar year emissions do not exceed the following limits.

- 5 TPY of any one criteria pollutant
- 2 TPY of any one hazardous air pollutant (HAP) or 5 TPY of multiple HAP or 20% of any threshold less than 10 TPY for a HAP that the EPA may establish by rule

Emission limitations and operational requirements necessary to assure compliance with all applicable requirements for all sources are taken from the current operating or from the permit application, or are developed from the applicable requirement.

OAC 252:100-9 (Excess Emissions Reporting Requirements) [Applicable]
Except as provided in OAC 252:100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following working day of the first occurrence of excess emissions in each excess emission event. No later than thirty (30) calendar days after the start of any excess emission event, the owner or operator of an air contaminant source from which excess emissions have occurred shall submit a report for each excess emission event describing the extent of the event and the actions taken by the owner or operator of the facility in response to this event. Request for affirmative defense, as described in OAC 252:100-9-8, shall be included in the excess emission event report. Additional reporting may be required in the case of ongoing emission events and in the case of excess emissions reporting required by 40 CFR Parts 60, 61, or 63.

OAC 252:100-13 (Open Burning) [Applicable]
 Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.

OAC 252:100-19 (Particulate Matter (PM)) [Applicable]
Section 19-4 regulates emissions of PM from new and existing fuel-burning equipment, with emission limits based on maximum design heat input rating. The facility does not use any indirectly fired fuel-burning units and is not subject to this section.
Section 19-12 limits particulate emissions from new and existing directly fired fuel-burning units (and/or) emission points in an industrial process based on process weight rate, as specified in Appendix G. Material in the firing process loses weight, so compliance with Appendix G limits is based on finished weight, providing conservatively high results. The calculated emission rate includes holding room, dryer, kiln, kiln car vacuum, and engraving data. Emissions from processes involving raw material, such as fugitives and grinding, are based on wet material throughput, using 3,120 hours of operation per year. Clearly, no single emission point exceeds the limit.

Source	Process Rate, TPH	Emissions, lb/hr	
		Appendix G Limit	Calculated Rate
Firing	< 10	19.2	4.16
Raw materials	35	41.3	2.63

OAC 252:100-25 (Smoke, Visible Emissions, and Particulate Matter) [Applicable]
 No discharge of greater than 20% opacity is allowed except for short-term occurrences that consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity. Proper operation of dust collectors assures compliance. Note that although the secondary crusher in the grinding room is an affected source under NSPS Subpart OOO, which contains opacity standards, it is not exempt from this subchapter because it is exempt from the opacity requirements of 40 CFR 60.672 per §60.670(d)(1).

OAC 252:100-29 (Fugitive Dust) [Applicable]
 No person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. Under normal operating conditions, this facility will not cause a problem in this area, therefore it is not necessary to require specific precautions to be taken.

OAC 252:100-31 (Sulfur Compounds) [Part 5 Applicable]
Part 5 limits sulfur dioxide (SO₂) emissions from new fuel-burning equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lb/MMBTU heat input averaged over 3 hours. For fuel gas having a gross calorific value of approximately 1,020 Btu/scf, this limit corresponds to fuel sulfur content of approximately 1,227 ppmv. The permit requires the use of pipeline natural gas as defined in Part 72 having 0.5 grains TRS/100 scf to ensure compliance with Subchapter 31.

OAC 252:100-33 (Nitrogen Oxides) [Not Applicable]

This subchapter limits new gas-fired fuel-burning equipment with rated heat input greater than or equal to 50 MMBTUH to emissions of 0.20 lbs of NO_x per MMBTU, three-hour average. There are no equipment items that exceed the 50 MMBTUH threshold.

OAC 252:100-35 (Carbon Monoxide) [Not Applicable]

This subchapter affects gray iron cupolas, blast furnaces, basic oxygen furnaces, petroleum catalytic cracking units, and petroleum catalytic reforming units. There are no affected sources.

OAC 252:100-37 (Volatile Organic Compounds) [Part 7 Applicable]

Part 3 requires storage tanks with a capacity of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5 psia to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. The vapor pressure of diesel is less than 1.5 psia. Therefore, the 3,000-gallon and 11,750-gallon diesel storage tanks are not subject to this requirement.

Part 5 limits the VOC content of coating used in coating lines or operations. This facility will not normally conduct coating or painting operations except for routine maintenance of the facility and equipment, which is not an affected operation.

Part 7 requires fuel-burning equipment to be operated and maintained so as to minimize VOC emissions. Temperature and available air must be sufficient to provide essentially complete combustion. The kiln burners are designed to provide essentially complete combustion of organic materials.

OAC 252:100-39 (VOC in Nonattainment and Former Nonattainment Areas) [Not Applicable]

This subchapter imposes additional conditions beyond those of Subchapter 37 on emissions of organic materials from new and existing facilities in Tulsa and Oklahoma Counties.

Part 7 contains rules affecting specific processes. Section 39-41(b) requires storage tanks with a capacity greater than 400 gallons and less than 40,000 gallons storing a VOC with a vapor pressure greater than 1.5 psia to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. The vapor pressure of diesel is less than 1.5 psia. Therefore, the 3,000-gallon and 11,750-gallon diesel storage tanks are not subject to this requirement.

Subsection 39-42(a) covers cold cleaning units, noting standards for construction and operation of such equipment. Paragraph 1 outlines equipment standards, including doors or covers, closed drainage, and conspicuous labeling. Paragraph 2 describes operating requirements; namely, appropriate draining procedures and times, keeping the unit covered when not in use, proper storage and disposal of waste solvent, and stipulates that spraying of VOC can be performed only in a solid stream. Paragraph 3 outlines requirements for controls if the solvent's vapor pressure exceeds certain limits. Paragraph 4 lists compliance and recordkeeping criteria.

Currently, the facility does not have any affected equipment items, and it is therefore not subject to the requirements of this subchapter.

OAC 252:100-42 (Toxic Air Contaminants (TAC)) [Applicable]
 This subchapter regulates toxic air contaminants (TAC) that are emitted into the ambient air in areas of concern (AOC). Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained, unless a modification is approved by the Director. Since no AOC has been designated there are no specific requirements for this facility at this time.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping) [Applicable]
 This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

The following Oklahoma Air Pollution Control Rules are not applicable to this facility.

OAC 252:100-7	Minor Source	not in source category
OAC 252:100-11	Alternative Reduction	not requested
OAC 252:100-15	Mobile Sources	not in source category
OAC 252:100-17	Incinerators	not in source category
OAC 252:100-23	Cotton Gins	not type of emission unit
OAC 252:100-24	Feed & Grain Facility	not in source category
OAC 252:100-37	Organic Materials	not in source category
OAC 252:100-47	Municipal Solid Waste Landfills	not in source category

VII. FEDERAL REGULATIONS

PSD, 40 CFR Part 52 [Not Applicable]
 Final total emissions are less than the threshold of 250 TPY of any single regulated pollutant and the facility is not one of the listed stationary sources with an emission threshold of 100 TPY.

NSPS, 40 CFR Part 60 [Subpart OOO Applicable]
Subpart OOO applies to each crusher, grinding mill, screening operation, bucket elevator, belt conveyor, bagging operation, storage bin, and enclosed truck or railcar loading station in

nonmetallic minerals processing plants that commenced construction, reconstruction, or modification after August 31, 1983. All of the original equipment that comprises the crushing, grinding, and screening operations was manufactured before the effective date of NSPS Subpart OOO and is not affected. However, the secondary crusher was replaced in 2000 by a like-kind crusher and is an affected facility. The crusher is not subject to the testing, monitoring, or recordkeeping and reporting requirements of 40 CFR 60.672, 674, and 675, per §670(d)(1).

Equipment	Latest date of manufacture, reconstruction, or modification
Primary crusher	1950
Secondary Crusher	2000
Screens No. 1, 2, & 3	1973
Conveyors	1973

Subpart UUU affects each calciner and dryer at a mineral processing plant that commences construction, modification, or reconstruction after April 23, 1986. According to 40 CFR 60.730(a), only calcining and drying prior to firing are covered operations. Further, §60.730(b) specifically states that tunnel dryers and tunnel kilns at mineral processing facilities that handle clay are not subject to the subpart.

NESHAP, 40 CFR Part 61 [Not Applicable]
 There are no emissions of any of the regulated pollutants: arsenic, asbestos, benzene, beryllium, coke oven emissions, mercury, radionuclides, or vinyl chloride, except for trace amounts of benzene. Subpart J, Equipment Leaks of Benzene, concerns only process streams that contain more than 10% benzene by weight. Analysis of Oklahoma natural gas indicates a maximum benzene content of less than 1%.

NESHAP, 40 CFR Part 63 [Subpart JJJJ Applicable]
Subpart JJJJ (Brick and Structural Clay Products Manufacturing) affects tunnel kilns located at major sources of HAP. Brick and structural clay products (BSCP) manufacturing facility is defined in 40 CFR 63.8515 as a plant site that manufactures brick (including, but not limited to, face brick, structural brick, and brick pavers); clay pipe; roof tile; extruded floor and wall tile; and/or other extruded, dimensional clay products. Brick and structural clay products manufacturing facilities typically process raw clay and shale, form the processed materials into bricks or shapes, and dry and fire the bricks or shapes. A tunnel kiln with a design capacity equal to greater than or 10 tons per hour of fired product is called a large tunnel kiln, and a tunnel kiln with a design capacity less than 10 tons per hour of fired product is called a small tunnel kiln. This facility fits the definition of an existing BSCP facility (constructed before December 18, 2014), and the tunnel kiln has a federally enforceable annual throughput limit of less than 10 TPH. Therefore, it is an existing small tunnel kiln with no add-on control, and the facility must comply with the requirements of this subpart no later than December 26, 2018.

CAM, 40 CFR Part 64 [Not Applicable]
 This part applies to any pollutant-specific emissions unit at a major source that is required to obtain an operating permit, for any application for an initial operating permit submitted after

April 20, 1998, that addresses “large emissions units,” or any application that addresses “large emissions units” as a significant modification to an operating permit, or for any application for renewal of an operating permit, if it meets all of the following criteria.

- It is subject to an emission limit or standard for an applicable regulated air pollutant
- It uses a control device to achieve compliance with the applicable emission limit or standard
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY or 10/25 TPY of a HAP

As mentioned, laser engraving has very small emissions and is controlled only to improve the process. The dust collector on the additives line (“manufacturing”) and pugmill is no longer necessary since the additives line has been largely dismantled. This leaves only the grinding room dust collector to consider as an active control device. The discussion of emissions earlier in this Memorandum reviewed emission factors from Section 11.3 of AP-42 (8/97). Grinding and screening factors for wet material, concerning the points covered by the collector, are 0.025 lb/T for PM and 0.0023 lb/T for PM10. Using the highest of these values and the estimated throughput yields 1.4 TPY of uncontrolled emissions, well below 100 TPY.

Chemical Accidental Release Prevention, 40 CFR Part 68 [Not Applicable]
This facility does not process or store more than the threshold quantity of any regulated substance (Section 112r of the Clean Air Act 1990 Amendments).

Stratospheric Ozone Protection, 40 CFR Part 82 [Not Applicable]
These standards require phase out of Class I & II substances, reductions of emissions of Class I & II substances to the lowest achievable level in all use sectors, and other matters.
This facility does not utilize any Class I & II substances.

VIII. COMPLIANCE

Tier Classification And Public Review

This application has been classified as **Tier II** based on the request for renewal of a Part 70 operating permit. The applicant has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant owns the property. Information on all permit actions is available for review by the public in the Air Quality section of the DEQ Web page: www.deq.state.ok.us/.

Acme Brick will publish a “Notice of a Tier II Draft Permit” when a draft of this permit is made available for public review for a period of thirty days. The applicant published a “Notice of Filing a Tier II Application” for review in the Tulsa World on October 15, 2014. The notice stated that additional information was available by contacting the applicant by telephone at (817) 870-8368 or in writing at 3024 Acme Brick Plaza, Fort Worth, Texas 76101, or by contacting AQD office in Oklahoma City. This site is not within 50 miles of the state border.

Testing

The Tulsa Plant tunnel kiln was performance tested on September 6, 2002. As noted earlier in

this Memorandum, results were converted to pounds per ton of fired brick and used in calculating anticipated emissions, as well as being used for establishing permit limits. The dryer and waste heat dump at an Acme-operated plant (Bennett) in Millsap, Texas were performance tested on June 2 – 6, 1997. Because of the similarity of operations between the plants, the data derived from the tests were used for the same purposes as stated for the 2002 Tulsa test. In this latter instance, all derived emission factors were greater than any published factors, so this is a conservatively high approach.

Tulsa Tunnel Kiln (Lbs/hr)

PM	2.576
VOC	2.001
HCl	2.548

CO	16.97
SO ₂	8.807

NO _x	6.844
HF	11.19

Bennett Dryer (Lbs/hr)

PM	0.289
VOC	0.641
HCl	<.001

CO	2.725
SO ₂	0.036

NO _x	0.027
HF	0.0035

Bennett Waste Heat Dump (Lbs/hr)

PM	1.541
VOC	0.239
HCl	0.174

CO	0.330
SO ₂	0.514

NO _x	0.117
HF	0.124

Inspection

A full compliance evaluation of the facility was performed on August 5, 2015, by DEQ Regional Office at Tulsa Environmental Specialists Michael Provence, Caysie Martin, and Corey Gum. Acme Brick Plant Manager Pete Turnbull and Safety and Environmental Coordinator Roger Gabal represented the facility throughout the evaluation. No violations were found.

Fee Paid

A fee of \$7,500 was paid for a Part 70 operating permit renewal.

IX. SUMMARY

This facility is operated as described in the application. There are no compliance or enforcement issues concerning this facility that would prevent the issuance of this permit. Issuance of the permit is recommended.

DRAFT

**PERMIT TO OPERATE
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS**

**Acme Brick Company
Tulsa Brick Plant**

Permit No. 2014-1978-TVR2

The permittee is authorized to operate in conformity with the specifications submitted to Air Quality on October 7, 2014. The Evaluation Memorandum, dated July 11, 2016, explains the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Continuing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein.

1. Emission limitations. [OAC 252:100-8-6(a)]

EUG-1 Facility-wide

This EUG is established to cover all rules or regulations that apply to the facility as a whole.

EUG-2 Roof vents exhaust manufacturing fugitives, and do not have specific emission limits.

ID #	Rated acfm
RV1	6,000
RV2	6,000
RV3	20,000

ID #	Rated acfm
RV4	55,000
RV5	20,000
RV6	55,000

EUG-3 Firing Processes

EU #	Equipment	Construction Date
1	Tunnel Dryer	1985
2	Holding Room	1985
3	Tunnel Kiln	1985
4	Waste Heat Dump	1985
5	Kiln Car Vacuum	1986

Emissions shall not exceed the following amounts (TPY).

Pollutant	Kiln	Dryer	Waste Heat Dump
PM*	12.4	0.92	4.93
CO	81.6	8.71	1.06
NO _x	32.9	0.09	0.37
VOC	9.62	2.05	0.76
SO ₂	42.3	0.12	1.64
HF	53.8	0.01	0.40
HCl	12.3	<0.003	0.56

*PM includes filterable and condensable, or “front-half” and “back-half.”

EUG-4 Controlled PM Emissions

This EUG contains only those sources whose particulate emissions are subject to control. In each case, the control device exhausts inside the building. The collector identified as EU #1 controls emissions from the secondary crusher, its feed hopper, and the three finishing screens. The collector identified as EU #2 was established to control particulate emissions from the additives line, which no longer exists, and from the pugmill associated with both the additives line and the existing automated line. The collector identified as EU #3 is used to improve process operations and is not a pollution control device.

Dust Collectors

EU #	Equipment	Construction Date
1	Grinding System	1995
2	“Manufacturing”	2002
3	Laser Engraving	2004

2. Total facility production shall be limited to 87,599 tons of finished brick products (fired ware) annually. Total annual facility use of natural gas is limited to 260,000 MMSCF.
[OAC 252:100-8-6(a)]

3. The grinding room shall remain enclosed except for normal ventilation openings such as windows and entry doors.
[OAC 252:100-8-6(a)]

4. The grinding room shall be operated with the dust collector (baghouse) operating in a range of 2 to 6 inches water column pressure differential. The dust collector may be replaced only by control equipment with equal or greater efficiency.
[OAC 252:100-43]

5. Fuel-burning equipment shall be fueled with pipeline natural gas as defined in Part 72 having 0.5 grains/100 scf or less total sulfur. Compliance can be shown by a current gas company bill, lab analysis, stain-tube analysis, gas contract, tariff sheet, or other approved method.
[OAC 252:100-31]

6. The facility shall be authorized to operate continuously (24 hours per day, every day of the year).
[OAC 252:100-8-6(a)]

7. The permittee shall keep records of operations as listed below. These records shall be maintained on-site, accessible to regulatory personnel upon request, and retained for a period of at least five (5) years following the dates of recording.
[OAC 252:100-43]
 - a. Fired brick production by weight (monthly and rolling 12 months cumulative).
 - b. Natural gas consumption (monthly and rolling 12 months cumulative).
 - c. Inspection and maintenance of air pollution control devices for proper operation including dust collector pressure differentials (daily when operating).
 - d. Records as required by NESHAP Subpart JJJJ.

8. The following records shall be maintained on-site to verify Insignificant Activities. No recordkeeping is required for those operations which qualify as Trivial Activities.

- a. The hours of operation for each piece of emergency equipment (annual total).
- b. The gallons of all cleaning solvents by each specific type with current MSDS data (annual total).
- c. Activities that have the potential to emit no more than 5 TPY (actual) of any criteria pollutant.
- d. Fuel throughput in gallons/month from bulk vehicle supply tanks, (based on fuel delivery tickets)

9. Factors used in calculating emissions shall be taken from Reference Method testing for the kiln and related firing systems. Factors for grinding emissions shall be taken from the most current version of AP-42 Section 11.3 and factors for all drop or transfer points shall be taken from the most current version of AP-42 Section 11.19. [OAC 252:100-43]

10. Parts washer stations shall have lids that can be easily opened with one hand, and each lid shall be closed except while parts are being handled in the unit. Each unit shall have a label describing proper work practices as outlined in OAC 252:100-39-42(a)2. Waste solvent shall be stored in closed containers until it is shipped off-site. [OAC 252:100-39-42]

11. No later than 30 days after each anniversary date of the issuance of the initial TV permit (December 22, 2004), the permittee shall submit to Air Quality Division of DEQ, with a copy to the US EPA, Region 6, certification of compliance with the terms and conditions of this permit. [OAC 252:100-8-6 (c)(5)(A) & (D)]

12. The permittee shall comply with applicable requirements of NESHAP Subpart JJJJJ, Brick and Structural Clay Products Manufacturing. [40 CFR Part 63, Subpart JJJJJ]

§63.8380 What is the purpose of this subpart?

§63.8385 Am I subject to this subpart?

§63.8390 What parts of my plant does this subpart cover?

§63.8395 When do I have to comply with this subpart?

§63.8405 What emission limitations and work practice standards must I meet?

§63.8410 What are my options for meeting the emission limitations and work practice standards?

§63.8420 What are my general requirements for complying with this subpart?

§63.8425 What do I need to know about operation, maintenance, and monitoring plans?

§63.8435 By what date must I conduct performance tests?

§63.8440 When must I conduct subsequent performance tests?

§63.8445 How do I conduct performance tests and establish operating limits?

§63.8450 What are my monitoring installation, operation, and maintenance requirements?

§63.8455 How do I demonstrate initial compliance with the emission limitations and work practice standards?

§63.8465 How do I monitor and collect data to demonstrate continuous compliance?

§63.8470 How do I demonstrate continuous compliance with the emission limitations and work practice standards?

§63.8480 What notifications must I submit and when?

§63.8485 What reports must I submit and when?

§63.8490 What records must I keep?

§63.8495 In what form and for how long must I keep my records?

§63.8505 What parts of the General Provisions apply to me?

§63.8510 Who implements and enforces this subpart?

§63.8515 What definitions apply to this subpart?

13. This permit supersedes all previous air quality operating permits for this facility, which are now cancelled.

**MAJOR SOURCE AIR QUALITY PERMIT
STANDARD CONDITIONS
(June 21, 2016)**

SECTION I. DUTY TO COMPLY

A. This is a permit to operate / construct this specific facility in accordance with the federal Clean Air Act (42 U.S.C. 7401, et al.) and under the authority of the Oklahoma Clean Air Act and the rules promulgated there under. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

B. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ). The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

C. The permittee shall comply with all conditions of this permit. Any permit noncompliance shall constitute a violation of the Oklahoma Clean Air Act and shall be grounds for enforcement action, permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. All terms and conditions are enforceable by the DEQ, by the Environmental Protection Agency (EPA), and by citizens under section 304 of the Federal Clean Air Act (excluding state-only requirements). This permit is valid for operations only at the specific location listed.

[40 C.F.R. §70.6(b), OAC 252:100-8-1.3 and OAC 252:100-8-6(a)(7)(A) and (b)(1)]

D. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations. [OAC 252:100-8-6(a)(7)(B)]

SECTION II. REPORTING OF DEVIATIONS FROM PERMIT TERMS

A. Any exceedance resulting from an emergency and/or posing an imminent and substantial danger to public health, safety, or the environment shall be reported in accordance with Section XIV (Emergencies). [OAC 252:100-8-6(a)(3)(C)(iii)(I) & (II)]

B. Deviations that result in emissions exceeding those allowed in this permit shall be reported consistent with the requirements of OAC 252:100-9, Excess Emission Reporting Requirements. [OAC 252:100-8-6(a)(3)(C)(iv)]

C. Every written report submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F. [OAC 252:100-8-6(a)(3)(C)(iv)]

SECTION III. MONITORING, TESTING, RECORDKEEPING & REPORTING

A. The permittee shall keep records as specified in this permit. These records, including monitoring data and necessary support information, shall be retained on-site or at a nearby field office for a period of at least five years from the date of the monitoring sample, measurement, report, or application, and shall be made available for inspection by regulatory personnel upon request. Support information includes all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Where appropriate, the permit may specify that records may be maintained in computerized form.

[OAC 252:100-8-6 (a)(3)(B)(ii), OAC 252:100-8-6(c)(1), and OAC 252:100-8-6(c)(2)(B)]

B. Records of required monitoring shall include:

- (1) the date, place and time of sampling or measurement;
- (2) the date or dates analyses were performed;
- (3) the company or entity which performed the analyses;
- (4) the analytical techniques or methods used;
- (5) the results of such analyses; and
- (6) the operating conditions existing at the time of sampling or measurement.

[OAC 252:100-8-6(a)(3)(B)(i)]

C. No later than 30 days after each six (6) month period, after the date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to AQD a report of the results of any required monitoring. All instances of deviations from permit requirements since the previous report shall be clearly identified in the report. Submission of these periodic reports will satisfy any reporting requirement of Paragraph E below that is duplicative of the periodic reports, if so noted on the submitted report.

[OAC 252:100-8-6(a)(3)(C)(i) and (ii)]

D. If any testing shows emissions in excess of limitations specified in this permit, the owner or operator shall comply with the provisions of Section II (Reporting Of Deviations From Permit Terms) of these standard conditions.

[OAC 252:100-8-6(a)(3)(C)(iii)]

E. In addition to any monitoring, recordkeeping or reporting requirement specified in this permit, monitoring and reporting may be required under the provisions of OAC 252:100-43, Testing, Monitoring, and Recordkeeping, or as required by any provision of the Federal Clean Air Act or Oklahoma Clean Air Act.

[OAC 252:100-43]

F. Any Annual Certification of Compliance, Semi Annual Monitoring and Deviation Report, Excess Emission Report, and Annual Emission Inventory submitted in accordance with this permit shall be certified by a responsible official. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

[OAC 252:100-8-5(f), OAC 252:100-8-6(a)(3)(C)(iv), OAC 252:100-8-6(c)(1), OAC 252:100-9-7(e), and OAC 252:100-5-2.1(f)]

G. Any owner or operator subject to the provisions of New Source Performance Standards (“NSPS”) under 40 CFR Part 60 or National Emission Standards for Hazardous Air Pollutants (“NESHAPs”) under 40 CFR Parts 61 and 63 shall maintain a file of all measurements and other information required by the applicable general provisions and subpart(s). These records shall be maintained in a permanent file suitable for inspection, shall be retained for a period of at least five years as required by Paragraph A of this Section, and shall include records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility, any malfunction of the air pollution control equipment; and any periods during which a continuous monitoring system or monitoring device is inoperative.

[40 C.F.R. §§60.7 and 63.10, 40 CFR Parts 61, Subpart A, and OAC 252:100, Appendix Q]

H. The permittee of a facility that is operating subject to a schedule of compliance shall submit to the DEQ a progress report at least semi-annually. The progress reports shall contain dates for achieving the activities, milestones or compliance required in the schedule of compliance and the dates when such activities, milestones or compliance was achieved. The progress reports shall also contain an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted. [OAC 252:100-8-6(c)(4)]

I. All testing must be conducted under the direction of qualified personnel by methods approved by the Division Director. All tests shall be made and the results calculated in accordance with standard test procedures. The use of alternative test procedures must be approved by EPA. When a portable analyzer is used to measure emissions it shall be setup, calibrated, and operated in accordance with the manufacturer’s instructions and in accordance with a protocol meeting the requirements of the “AQD Portable Analyzer Guidance” document or an equivalent method approved by Air Quality.

[OAC 252:100-8-6(a)(3)(A)(iv), and OAC 252:100-43]

J. The reporting of total particulate matter emissions as required in Part 7 of OAC 252:100-8 (Permits for Part 70 Sources), OAC 252:100-19 (Control of Emission of Particulate Matter), and OAC 252:100-5 (Emission Inventory), shall be conducted in accordance with applicable testing or calculation procedures, modified to include back-half condensables, for the concentration of particulate matter less than 10 microns in diameter (PM₁₀). NSPS may allow reporting of only particulate matter emissions caught in the filter (obtained using Reference Method 5).

K. The permittee shall submit to the AQD a copy of all reports submitted to the EPA as required by 40 C.F.R. Part 60, 61, and 63, for all equipment constructed or operated under this permit subject to such standards. [OAC 252:100-8-6(c)(1) and OAC 252:100, Appendix Q]

SECTION IV. COMPLIANCE CERTIFICATIONS

A. No later than 30 days after each anniversary date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to the AQD, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit and of any other applicable requirements which have become effective since the issuance of this permit.

[OAC 252:100-8-6(c)(5)(A), and (D)]

B. The compliance certification shall describe the operating permit term or condition that is the basis of the certification; the current compliance status; whether compliance was continuous or intermittent; the methods used for determining compliance, currently and over the reporting period. The compliance certification shall also include such other facts as the permitting authority may require to determine the compliance status of the source.

[OAC 252:100-8-6(c)(5)(C)(i)-(v)]

C. The compliance certification shall contain a certification by a responsible official as to the results of the required monitoring. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

[OAC 252:100-8-5(f) and OAC 252:100-8-6(c)(1)]

D. Any facility reporting noncompliance shall submit a schedule of compliance for emissions units or stationary sources that are not in compliance with all applicable requirements. This schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the emissions unit or stationary source is in noncompliance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the emissions unit or stationary source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based, except that a compliance plan shall not be required for any noncompliance condition which is corrected within 24 hours of discovery.

[OAC 252:100-8-5(e)(8)(B) and OAC 252:100-8-6(c)(3)]

SECTION V. REQUIREMENTS THAT BECOME APPLICABLE DURING THE PERMIT TERM

The permittee shall comply with any additional requirements that become effective during the permit term and that are applicable to the facility. Compliance with all new requirements shall be certified in the next annual certification.

[OAC 252:100-8-6(c)(6)]

SECTION VI. PERMIT SHIELD

A. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC 252:100-8) shall be deemed compliance with the applicable requirements identified and included in this permit.

[OAC 252:100-8-6(d)(1)]

B. Those requirements that are applicable are listed in the Standard Conditions and the Specific Conditions of this permit. Those requirements that the applicant requested be determined as not applicable are summarized in the Specific Conditions of this permit.

[OAC 252:100-8-6(d)(2)]

SECTION VII. ANNUAL EMISSIONS INVENTORY & FEE PAYMENT

The permittee shall file with the AQD an annual emission inventory and shall pay annual fees based on emissions inventories. The methods used to calculate emissions for inventory purposes shall be based on the best available information accepted by AQD.

[OAC 252:100-5-2.1, OAC 252:100-5-2.2, and OAC 252:100-8-6(a)(8)]

SECTION VIII. TERM OF PERMIT

A. Unless specified otherwise, the term of an operating permit shall be five years from the date of issuance. [OAC 252:100-8-6(a)(2)(A)]

B. A source's right to operate shall terminate upon the expiration of its permit unless a timely and complete renewal application has been submitted at least 180 days before the date of expiration. [OAC 252:100-8-7.1(d)(1)]

C. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-8-1.4(b)) if the construction is not commenced within 18 months after the date the permit or authorization was issued, or if work is suspended for more than 18 months after it is commenced. [OAC 252:100-8-1.4(a)]

D. The recipient of a construction permit shall apply for a permit to operate (or modified operating permit) within 180 days following the first day of operation. [OAC 252:100-8-4(b)(5)]

SECTION IX. SEVERABILITY

The provisions of this permit are severable and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

[OAC 252:100-8-6 (a)(6)]

SECTION X. PROPERTY RIGHTS

A. This permit does not convey any property rights of any sort, or any exclusive privilege.

[OAC 252:100-8-6(a)(7)(D)]

B. This permit shall not be considered in any manner affecting the title of the premises upon which the equipment is located and does not release the permittee from any liability for damage to persons or property caused by or resulting from the maintenance or operation of the equipment for which the permit is issued. [OAC 252:100-8-6(c)(6)]

SECTION XI. DUTY TO PROVIDE INFORMATION

A. The permittee shall furnish to the DEQ, upon receipt of a written request and within sixty (60) days of the request unless the DEQ specifies another time period, any information that the DEQ may request to determine whether cause exists for modifying, reopening, revoking,

reissuing, terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit.

[OAC 252:100-8-6(a)(7)(E)]

B. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 27A O.S. § 2-5-105(18). Confidential information shall be clearly labeled as such and shall be separable from the main body of the document such as in an attachment.

[OAC 252:100-8-6(a)(7)(E)]

C. Notification to the AQD of the sale or transfer of ownership of this facility is required and shall be made in writing within thirty (30) days after such sale or transfer.

[Oklahoma Clean Air Act, 27A O.S. § 2-5-112(G)]

SECTION XII. REOPENING, MODIFICATION & REVOCATION

A. The permit may be modified, revoked, reopened and reissued, or terminated for cause. Except as provided for minor permit modifications, the filing of a request by the permittee for a permit modification, revocation and reissuance, termination, notification of planned changes, or anticipated noncompliance does not stay any permit condition.

[OAC 252:100-8-6(a)(7)(C) and OAC 252:100-8-7.2(b)]

B. The DEQ will reopen and revise or revoke this permit prior to the expiration date in the following circumstances:

[OAC 252:100-8-7.3 and OAC 252:100-8-7.4(a)(2)]

- (1) Additional requirements under the Clean Air Act become applicable to a major source category three or more years prior to the expiration date of this permit. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit.
- (2) The DEQ or the EPA determines that this permit contains a material mistake or that the permit must be revised or revoked to assure compliance with the applicable requirements.
- (3) The DEQ or the EPA determines that inaccurate information was used in establishing the emission standards, limitations, or other conditions of this permit. The DEQ may revoke and not reissue this permit if it determines that the permittee has submitted false or misleading information to the DEQ.
- (4) DEQ determines that the permit should be amended under the discretionary reopening provisions of OAC 252:100-8-7.3(b).

C. The permit may be reopened for cause by EPA, pursuant to the provisions of OAC 100-8-7.3(d).

[OAC 100-8-7.3(d)]

D. The permittee shall notify AQD before making changes other than those described in Section XVIII (Operational Flexibility), those qualifying for administrative permit amendments, or those defined as an Insignificant Activity (Section XVI) or Trivial Activity (Section XVII). The notification should include any changes which may alter the status of a “grandfathered source,” as defined under AQD rules. Such changes may require a permit modification.

[OAC 252:100-8-7.2(b) and OAC 252:100-5-1.1]

E. Activities that will result in air emissions that exceed the trivial/insignificant levels and that are not specifically approved by this permit are prohibited. [OAC 252:100-8-6(c)(6)]

SECTION XIII. INSPECTION & ENTRY

A. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized regulatory officials to perform the following (subject to the permittee's right to seek confidential treatment pursuant to 27A O.S. Supp. 1998, § 2-5-105(17) for confidential information submitted to or obtained by the DEQ under this section):

- (1) enter upon the permittee's premises during reasonable/normal working hours where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
- (2) have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- (3) inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
- (4) as authorized by the Oklahoma Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit.

[OAC 252:100-8-6(c)(2)]

SECTION XIV. EMERGENCIES

A. Any exceedance resulting from an emergency shall be reported to AQD promptly but no later than 4:30 p.m. on the next working day after the permittee first becomes aware of the exceedance. This notice shall contain a description of the emergency, the probable cause of the exceedance, any steps taken to mitigate emissions, and corrective actions taken.

[OAC 252:100-8-6 (a)(3)(C)(iii)(I) and (IV)]

B. Any exceedance that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to AQD as soon as is practicable; but under no circumstance shall notification be more than 24 hours after the exceedance. [OAC 252:100-8-6(a)(3)(C)(iii)(II)]

C. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. [OAC 252:100-8-2]

D. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that: [OAC 252:100-8-6 (e)(2)]

- (1) an emergency occurred and the permittee can identify the cause or causes of the emergency;
- (2) the permitted facility was at the time being properly operated;
- (3) during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit.

E. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [OAC 252:100-8-6(e)(3)]

F. Every written report or document submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F. [OAC 252:100-8-6(a)(3)(C)(iv)]

SECTION XV. RISK MANAGEMENT PLAN

The permittee, if subject to the provision of Section 112(r) of the Clean Air Act, shall develop and register with the appropriate agency a risk management plan by June 20, 1999, or the applicable effective date. [OAC 252:100-8-6(a)(4)]

SECTION XVI. INSIGNIFICANT ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate individual emissions units that are either on the list in Appendix I to OAC Title 252, Chapter 100, or whose actual calendar year emissions do not exceed any of the limits below. Any activity to which a State or Federal applicable requirement applies is not insignificant even if it meets the criteria below or is included on the insignificant activities list.

- (1) 5 tons per year of any one criteria pollutant.
- (2) 2 tons per year for any one hazardous air pollutant (HAP) or 5 tons per year for an aggregate of two or more HAP's, or 20 percent of any threshold less than 10 tons per year for single HAP that the EPA may establish by rule.

[OAC 252:100-8-2 and OAC 252:100, Appendix I]

SECTION XVII. TRIVIAL ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate any individual or combination of air emissions units that are considered inconsequential and are on the list in Appendix J. Any activity to which a State or Federal applicable requirement applies is not trivial even if included on the trivial activities list.

[OAC 252:100-8-2 and OAC 252:100, Appendix J]

SECTION XVIII. OPERATIONAL FLEXIBILITY

A. A facility may implement any operating scenario allowed for in its Part 70 permit without the need for any permit revision or any notification to the DEQ (unless specified otherwise in the

permit). When an operating scenario is changed, the permittee shall record in a log at the facility the scenario under which it is operating. [OAC 252:100-8-6(a)(10) and (f)(1)]

B. The permittee may make changes within the facility that:

- (1) result in no net emissions increases,
- (2) are not modifications under any provision of Title I of the federal Clean Air Act, and
- (3) do not cause any hourly or annual permitted emission rate of any existing emissions unit to be exceeded;

provided that the facility provides the EPA and the DEQ with written notification as required below in advance of the proposed changes, which shall be a minimum of seven (7) days, or twenty four (24) hours for emergencies as defined in OAC 252:100-8-6 (e). The permittee, the DEQ, and the EPA shall attach each such notice to their copy of the permit. For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The permit shield provided by this permit does not apply to any change made pursuant to this paragraph. [OAC 252:100-8-6(f)(2)]

SECTION XIX. OTHER APPLICABLE & STATE-ONLY REQUIREMENTS

A. The following applicable requirements and state-only requirements apply to the facility unless elsewhere covered by a more restrictive requirement:

- (1) Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in the Open Burning Subchapter. [OAC 252:100-13]
- (2) No particulate emissions from any fuel-burning equipment with a rated heat input of 10 MMBTUH or less shall exceed 0.6 lb/MMBTU. [OAC 252:100-19]
- (3) For all emissions units not subject to an opacity limit promulgated under 40 C.F.R., Part 60, NSPS, no discharge of greater than 20% opacity is allowed except for: [OAC 252:100-25]
 - (a) Short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity;
 - (b) Smoke resulting from fires covered by the exceptions outlined in OAC 252:100-13-7;
 - (c) An emission, where the presence of uncombined water is the only reason for failure to meet the requirements of OAC 252:100-25-3(a); or
 - (d) Smoke generated due to a malfunction in a facility, when the source of the fuel producing the smoke is not under the direct and immediate control of the facility and the immediate constriction of the fuel flow at the facility would produce a hazard to life and/or property.

- (4) No visible fugitive dust emissions shall be discharged beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. [OAC 252:100-29]
- (5) No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lb/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]
- (6) Volatile Organic Compound (VOC) storage tanks built after December 28, 1974, and with a capacity of 400 gallons or more storing a liquid with a vapor pressure of 1.5 psia or greater under actual conditions shall be equipped with a permanent submerged fill pipe or with a vapor-recovery system. [OAC 252:100-37-15(b)]
- (7) All fuel-burning equipment shall at all times be properly operated and maintained in a manner that will minimize emissions of VOCs. [OAC 252:100-37-36]

SECTION XX. STRATOSPHERIC OZONE PROTECTION

A. The permittee shall comply with the following standards for production and consumption of ozone-depleting substances: [40 CFR 82, Subpart A]

- (1) Persons producing, importing, or placing an order for production or importation of certain class I and class II substances, HCFC-22, or HCFC-141b shall be subject to the requirements of §82.4;
- (2) Producers, importers, exporters, purchasers, and persons who transform or destroy certain class I and class II substances, HCFC-22, or HCFC-141b are subject to the recordkeeping requirements at §82.13; and
- (3) Class I substances (listed at Appendix A to Subpart A) include certain CFCs, Halons, HBFCs, carbon tetrachloride, trichloroethane (methyl chloroform), and bromomethane (Methyl Bromide). Class II substances (listed at Appendix B to Subpart A) include HCFCs.

B. If the permittee performs a service on motor (fleet) vehicles when this service involves an ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all applicable requirements. Note: The term “motor vehicle” as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term “MVAC” as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or the system used on passenger buses using HCFC-22 refrigerant. [40 CFR 82, Subpart B]

C. The permittee shall comply with the following standards for recycling and emissions reduction except as provided for MVACs in Subpart B: [40 CFR 82, Subpart F]

- (1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156;
- (2) Equipment used during the maintenance, service, repair, or disposal of appliances must

- comply with the standards for recycling and recovery equipment pursuant to § 82.158;
- (3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161;
 - (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record-keeping requirements pursuant to § 82.166;
 - (5) Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to § 82.158; and
 - (6) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.

SECTION XXI. TITLE V APPROVAL LANGUAGE

A. DEQ wishes to reduce the time and work associated with permit review and, wherever it is not inconsistent with Federal requirements, to provide for incorporation of requirements established through construction permitting into the Source's Title V permit without causing redundant review. Requirements from construction permits may be incorporated into the Title V permit through the administrative amendment process set forth in OAC 252:100-8-7.2(a) only if the following procedures are followed:

- (1) The construction permit goes out for a 30-day public notice and comment using the procedures set forth in 40 C.F.R. § 70.7(h)(1). This public notice shall include notice to the public that this permit is subject to EPA review, EPA objection, and petition to EPA, as provided by 40 C.F.R. § 70.8; that the requirements of the construction permit will be incorporated into the Title V permit through the administrative amendment process; that the public will not receive another opportunity to provide comments when the requirements are incorporated into the Title V permit; and that EPA review, EPA objection, and petitions to EPA will not be available to the public when requirements from the construction permit are incorporated into the Title V permit.
- (2) A copy of the construction permit application is sent to EPA, as provided by 40 CFR § 70.8(a)(1).
- (3) A copy of the draft construction permit is sent to any affected State, as provided by 40 C.F.R. § 70.8(b).
- (4) A copy of the proposed construction permit is sent to EPA for a 45-day review period as provided by 40 C.F.R. § 70.8(a) and (c).
- (5) The DEQ complies with 40 C.F.R. § 70.8(c) upon the written receipt within the 45-day comment period of any EPA objection to the construction permit. The DEQ shall not issue the permit until EPA's objections are resolved to the satisfaction of EPA.
- (6) The DEQ complies with 40 C.F.R. § 70.8(d).
- (7) A copy of the final construction permit is sent to EPA as provided by 40 CFR § 70.8(a).
- (8) The DEQ shall not issue the proposed construction permit until any affected State and EPA have had an opportunity to review the proposed permit, as provided by these permit conditions.
- (9) Any requirements of the construction permit may be reopened for cause after incorporation into the Title V permit by the administrative amendment process, by

DEQ as provided in OAC 252:100-8-7.3(a), (b), and (c), and by EPA as provided in 40 C.F.R. § 70.7(f) and (g).

- (10) The DEQ shall not issue the administrative permit amendment if performance tests fail to demonstrate that the source is operating in substantial compliance with all permit requirements.

B. To the extent that these conditions are not followed, the Title V permit must go through the Title V review process.

SECTION XXII. CREDIBLE EVIDENCE

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any provision of the Oklahoma implementation plan, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[OAC 252:100-43-6]



PART 70 PERMIT

AIR QUALITY DIVISION
STATE OF OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
707 N. ROBINSON, SUITE 4100
P.O. BOX 1677
OKLAHOMA CITY, OKLAHOMA 73101-1677

Permit No. 2014-1978-TVR2

ACME Brick Company,

having complied with the requirements of the law, is hereby granted permission to operate
all the sources within the boundaries of the Tulsa Brick Plant at 4103 Dawson Road, Tulsa,
Tulsa County, Oklahoma,

subject to standard conditions dated July 21, 2009, and specific conditions, both attached.

This permit shall expire five (5) years from the date below, except as authorized under Section VIII of the Standard Conditions.

Director, Air Quality Division

Date

Lynn Burchfield, Regional Production Manager
Acme Brick Company
206 Dotson Street
Denton, Texas 76205

SUBJECT: Permit Number: **2014-1978-TV2**
Facility: Tulsa Brick Plant (Facility ID 8)
Location: 4103 Dawson Road, Tulsa, Tulsa County

Dear Mr. Burchfield:

Air Quality has received the permit application for the referenced facility and completed initial review. This application has been determined to be a Tier II application. In accordance with 27A O.S. 2-14-301 and 302 and OAC 252:4-7-13(c), the enclosed draft permit is now ready for public review. The requirements for public review of the draft permit include the following steps, which you must accomplish.

1. Publish at least one legal notice (one day) in at least one newspaper of general circulation within the county where the facility is located. (Instructions enclosed)
2. Provide for public review, for a period of 30 days following the date of the newspaper announcement, a copy of the application and draft permit at a convenient location (preferentially at a public location) within the county of the facility.
3. Send AQD a signed affidavit of publication for the notice(s) from Item #1 above within 20 days of publication of the draft permit. Any additional comments or requested changes you have for the draft permit or the application should be submitted within 30 days of publication.

Thank you for your cooperation in this matter. If we may be of further service, please contact the permit writer (918) 293-1616 or by mail at DEQ Regional Office at Tulsa, 3105 East Skelly Drive, Suite 200, Tulsa, Oklahoma, 74105.

Sincerely,

Phillip Fielder
Permits and Engineering Group Manager
AIR QUALITY DIVISION

DRAFT

**NOTICE OF DRAFT PERMIT
TIER II or TIER III AIR QUALITY PERMIT APPLICATION**

APPLICANT RESPONSIBILITIES

Permit applicants are required to give public notice that a Tier II or Tier III draft permit has been prepared by DEQ. The notice must be published in one newspaper local to the site or facility. Upon publication, a signed affidavit of publication must be obtained from the newspaper and sent to AQD. Note that if either the applicant or the public requests a public meeting, this must be arranged through the Customer Services Division of the DEQ.

REQUIRED CONTENT (27A O.S. § 2-14-302 and OAC 252:4-7-13(c))

1. A statement that a Tier II or Tier III draft permit has been prepared by DEQ;
2. Name and address of the applicant;
3. Name, address, driving directions, legal description and county of the site or facility;
4. The type of permit or permit action being sought;
5. A description of activities to be regulated, including an estimate of emissions from the facility;
6. Location(s) where the application and draft permit may be reviewed (a location in the county where the site/facility is located must be included);
7. Name, address, and telephone number of the applicant and DEQ contacts;
8. Any additional information required by DEQ rules or deemed relevant by applicant;
9. A 30-day opportunity to request a formal public meeting on the draft permit.

SAMPLE NOTICE on page 2.

DRAFT

SAMPLE NOTICE (*Italicized print is to be filled in by the applicant.*):

DEQ NOTICE OF TIER *...II or III...* DRAFT PERMIT

A Tier *...II or III...* application for an air quality *...type of permit or permit action being sought (e.g., Construction Permit for a Major Facility)...* has been filed with the Oklahoma Department of Environmental Quality (DEQ) by applicant, *...name and address.*

The applicant requests approval to *...brief description of purpose of application...* at the *...site/facility name ...* **[proposed to be]** located at *...physical address (if any), driving directions, and legal description including county....*

In response to the application, DEQ has prepared a draft permit **[modification]** (Permit Number: *...xx-xxx-x...*), which may be reviewed at *...locations (one must be in the county where the site/facility is located)...* or at the Air Quality Division's main office (see address below). The draft permit is also available for review in the Air Quality Section of DEQ's Web Page: <http://www.deq.state.ok.us/>

This draft permit would authorize the facility to emit the following regulated pollutants: (*list each pollutant and amounts in tons per year (TPY)*)

The public comment period ends 30 days after the date of publication of this notice. Any person may submit written comments concerning the draft permit to the Air Quality Division contact listed below. [Modifications only, add: Only those issues relevant to the proposed modification(s) are open for comment.] A public meeting on the draft permit **[modification]** may also be requested in writing at the same address. Note that all public meetings are to be arranged and conducted by DEQ/CSD staff.

In addition to the public comment opportunity offered under this notice, this draft permit is subject to U.S. Environmental Protection Agency (EPA) review, EPA objection, and petition to EPA, as provided by 40 CFR § 70.8. [For Construction Permits, add: The requirements of the construction permit will be incorporated into the Title V permit through the administrative amendment process. Therefore, no additional opportunity to provide comments or EPA review, EPA objection, and petitions to EPA will be available to the public when requirements from the construction permit are incorporated into the Title V permit.]

If the Administrator (EPA) does not object to the proposed permit, the public has 60 days following the Administrator's 45 day review period to petition the Administrator to make such an objection as provided in 40 CFR 70.8(d) and in OAC 252:100-8-8(j). Information on all permit actions and applicable review time lines is available in the Air Quality section of the DEQ Web page: <http://www.deq.state.ok.us/>.

For additional information, contact *...names, addresses and telephone numbers of contact persons for the applicant,* or contact DEQ at: Chief Engineer, Permits & Engineering Group, Air Quality Division, 707 N. Robinson, Suite 4100, P.O. Box 1677, Oklahoma City, OK, 73101-1677. Phone No. (405) 702-4100.